

Amendments to the Drawings:

Replacement sheets for FIGS. 1-6 are enclosed which formalize the drawings that were submitted with the application. No other changes have been made. Formal drawings are submitted herewith under separate Letter to the Official Draftsperson. Approval by the Examiner is respectfully requested.

Attachment: Replacement Figures 1-6

REMARKS

Applicant's election with traverse of claims 1-16 in the reply filed on 1/11/05 was acknowledged. The remaining claims are withdrawn.

Formal drawings are submitted herewith under separate Letter to the Official Draftsperson. Approval by the Examiner of these drawings is respectfully requested.

Claims 1, 4-8, 10, and 13-16 were rejected under 35 U.S.C. § 102(e) as being anticipated by Grant et al. (2003/0116091). Claims 1, 2, and 4-7 were rejected under 35 U.S.C. § 102(b) as being anticipated by Tsunashima et al. (5,849,089). Claims 1, 2, 4-7, 10, 11, and 13-15 were rejected under 35 U.S.C. § 102(b) as being anticipated by Xu et al. (6,331,211). Claims 1, 4-7 and 9 were rejected under 35 U.S.C. § 102(b) as being anticipated by GB 1,253,124.

By this amendment, the claims have been changed to indicate that the claimed methods relate to vaporizing solid organic materials. Some general comments are appropriate about the art cited by the Examiner. All of the art cited by the Examiner uses a liquid and not a solid. Until the present invention, it was generally accepted that solid materials could not be properly metered to provide a steady vapor deposition rate without the use of carrier gases or otherwise fluidizing solids. Applicants have provided structures that permit the metering of solid organic material from a first heated region to a second heated region to form a thin cross section that is vaporized. Heretofore, no one recognized that a thin cross section of thin metered organic material, as in independent claims 1-10, could be vaporized at a steady rate and constantly replenished by metering at a controlled rate to form a film on a substrate.

Claims 3 and 12 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Grant et al.

Turning now to Grant et al. where they show a structure that is suitable for chemical vapor deposition. Grant et al. atomizes fine liquid droplets and injects them with a carrier gas into a heated volume where they are vaporized. Clearly, there is no correspondence with the thin cross section of solid organic materials found in the present invention. Moreover, Grant et al. uses a liquid precursor blend and atomizes it through a venturi tube. A thermal barrier is located between liquid supply assembly and vaporization chamber to maintain a

large temperature difference between liquid supply and the vaporization chamber. There is nothing in the Grant et al. reference that discloses, provides, or suggests any motivation for the method of claims 1-10 wherein solid organic material is metered from a first region to a second region where a thin cross section is vaporized to form a layer on a substrate. Applicants fail to see how Grant et al. could even be adapted for using solid organic materials as set forth in claims 1-10. What the Examiner has done is to attribute certain operating characteristics to the structure in Grant et al. which are not possible when solid organic material is used in the claimed matter.

Claims 3 and 12 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Xu et al.

Xu et al. also injects a liquid precursor or organic solutions containing precursors with the use of a carrier gas. A heated porous membrane element is where vaporization occurs. Clearly, Xu et al. do not suggest or disclose a structure for using solid organic material. Moreover, Xu et al. crack the precursor once vaporized because they are using a chemical vapor deposition process. This process is different than the present claimed process which is a physical vapor deposition process meaning that the solid organic materials do not change their chemical structure when vaporized and deposited. The cracking process would damage the solid organic material and is not suitable for suitable vapor deposition of solid organic materials. Applicants fail to see how Xu et al. could even be adapted to provide the process of claims 1-10.

Claim 3 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Tsunashima et al.

Claim 3 was rejected citing Tsunashima et al. In Tsunashima et al., a liquid TEOS is provided in an annual space about a chamber. The liquid material passes through holes in a cylindrical stainless steel structure. At the outset, Applicants note that there are not two distinct heated regions of different temperatures. This arrangement requires a liquid and not a solid for constant replenishment. Nor can Applicants find any suggestion on how Tsunashima et al. can even be used as a solid organic material as provided in claims 1-10. Therefore, claims 1-10 define unobvious subject matter over Tsunashima et al.

Claims 3 was rejected under 35 U.S.C. § 103(a) as being unpatentable over GB 1,253,124.

GB 1,253,124 uses a liquified non-thermal setting material and positions such material onto the rotating surface of a drum where it is heated and vaporized. The material is kept at a molten state before being placed onto the surface of the drum or roller. The roller carries the heated elements which cause the vaporization of the film or epoxy resin. This type of structure could not even be adapted for the present invention because it requires a handling of a molten state type resin and does not provide for constant metering of solid organic materials.

In view of the foregoing, it is believed that these changes now make the claims clear and definite. None of the references, taken singly or in combination, disclose, suggest, or provide any motivation for the methods found in independent claims 1 and 10. These claims are believed to define unobvious subject matter and the dependent claims, which depend upon them, should also be allowable. If there are any problems with these changes, Applicants' attorney would appreciate a telephone call. Accordingly, this application is believed to be in condition for allowance, the notice of which is respectfully requested.

Respectfully submitted,



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If the Examiner is unable to reach the Applicant(s) Attorney at the telephone number provided, the Examiner is requested to communicate with Eastman Kodak Company Patent Operations at (585) 477-4656.